

Translational Research to Address Cardiometabolic Disparities

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Why do American Indians suffer a disproportionate burden of diabetes and diabetes-related complications?



Why aren't they benefiting from what we already know?

Translational research

- Systematic effort to apply discoveries generated during research in the laboratory to the development of studies in humans.
- Research aimed at enhancing the adoption of best practices in communities.
- Researchers partner with a community and ask for ideas about how their findings might apply there. Together, they would come up with an intervention plan that would also include scientific evaluation of its effectiveness

The Continuum of Clinical and Translational Science

T0

Targets
Biomarkers
Genes
Pathways
Mechanisms

T1

First in Human
Phase I-II Trials
Proof of Concept

T2

Phase III Trials
Clinical Efficacy
Clinical Guidelines

T3

Dissemination
Community Engagement
Health Services Research
Comparative Effectiveness

T4

Public Health
Prevention
Population Health Impact
Behavioral Modifications
Lifestyle Modifications

T5

Social Health Care
Political Security
Economic Opportunity
Access to Education
Access to Health Care

Why is translational research important?

It takes an average of 17 years to implement new clinical research findings into practice

Bench



Bedside



Community



Our Approach to Research

- Community-engaged research
- Co-learning process
- Community prime recipient of award or equal distribution of funding among partners
- Community Advisory Boards
- Focus Groups to inform program development and implementation
- Hire and train community members to implement interventions
- Offer programs in community settings
- Disseminate study results to communities



Strong in Body & Spirit

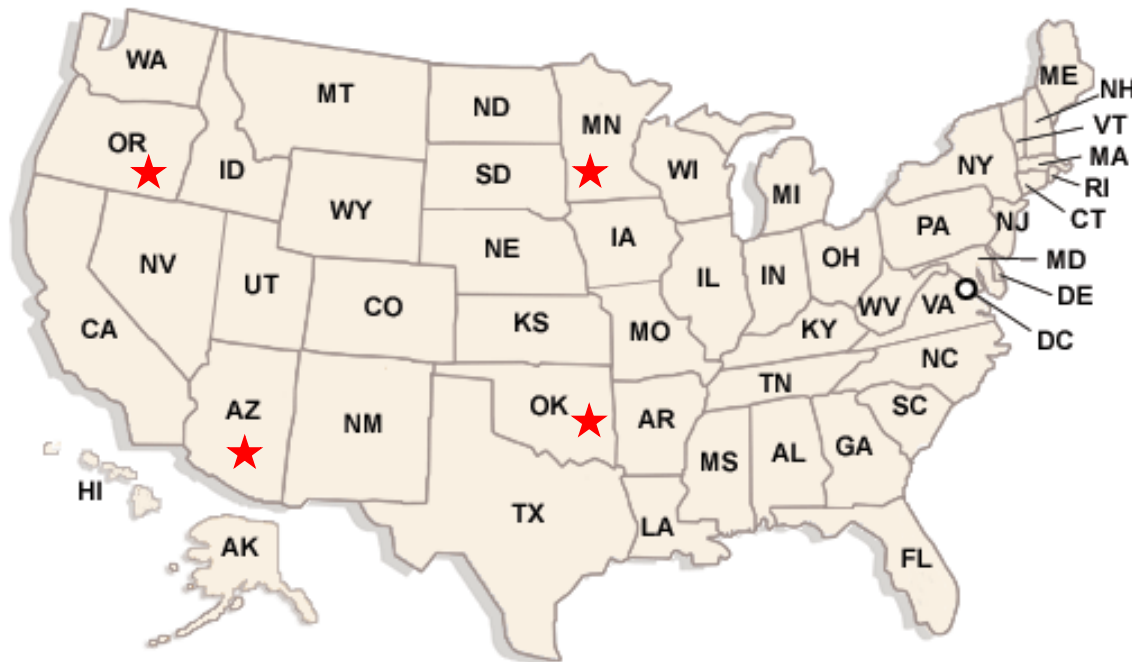
- Diabetes lifestyle intervention – diet and exercise
 - 1993-1997 - 8 New Mexico Rio Grande Pueblo communities
 - Delivered by trained community members
- Intervention participants had ~.8% change in A1c

Gilliland SS, Azen SP, Perez GE, Carter JS. Strong in Body and Spirit: Lifestyle intervention for Native Americans in New Mexico. Diabetes Care. 25(1):78-83, 2002.

<http://www.laplaza.org/health/dwc/nadp/>

Dissemination - SBS Team Training

- Train the trainer developed for community health representatives
- November 1998-1999
 - 4 regional trainings – 39 teams, 159 individuals



Diabetes Self-Management Interventions

- Partners in Care (AI) – 1997-1999
- Journey to Health – REACH Detroit (AA and Latino) – 2001-2003
 - implemented 2nd time with REACH funding
- Partners in Care (NHPI Hawai`i) – 2010-2012
 - Integrated into usual care at 3 community health clinics
 - Continued implementation in NH community
 - New trainings – Saipan (2016) and larger Pacific Island community (2017)

A Culturally Tailored Intervention to Prevent Diabetes in American Indian Men

- AI men from large tribe in Washington
- Adapted Diabetes Prevention Program Lifestyle Intervention
- Weight loss in overweight/obese AI men
- Focus groups and surveys
- 3 month educational program with facilitated physical activity and cultural activities (berry picking, shed hunting, preparing salmon and wild game, powwow dancing, drumming)
- Recruitment – January 2017

Strong Men, Strong Communities

- American Indian men in 3 sites (80/site)
- Adapted Diabetes Prevention Program Lifestyle Intervention
- Weight loss in overweight/obese AI men
- Focus groups and surveys - January 2017
- Educational program with facilitated physical activity and cultural activities
- Recruitment – late 2017

Deliberative discussions with American Indians to understand views and concerns about biospecimen donation and biobanking

- AI/AN under-represented in clinical trials
- Precision Medicine Initiative
- Biospecimen research – legal, ethical, social, spiritual, and political issues
- Biospecimen education to AI/ANs and healthcare providers
- Solicit and assess views on biobank and biospecimen research policies and procedures

Culturally Adapted Strategies to Enhance Kidney Donation in Native Communities

- Informed by prior study to increase deceased donation
- American Indians with End Stage Renal Disease undergoing dialysis treatment
- Puget Sound area and 2 Montana tribes
- Focus Groups: knowledge, concerns about kidney transplant and living donor kidney transplantation
- Educational curriculum for dialysis patient and potential donors about kidney transplant and living donor kidney transplant processes

Diet Intervention for Hypertension: Adaptation and Dissemination to Native Communities

- American Indians with physician-diagnosis of uncontrolled hypertension
- 2 Clinics: Oklahoma and Washington
- Focus groups
- Nutritionist
- DASH diet
- 8 weekly grocery store orders
- Intervention group – DASH foods
- Comparison group – any food items
- Outcomes – improved systolic blood pressure; decreased urinary sodium and increased potassium
- Recruitment to begin January 2017

Engaging NHPs and Activating Communities to Take Steps (ENACTS)

- Native-Controlling Hypertension And Risk Through Technology (Native-Chart)
- National Institute of Minority Health Disparities
- Recruit 500 Native Hawaiian and other Pacific Islanders with physician-diagnosis of uncontrolled hypertension in Puget Sound area
- Education with participants and family member(s) – diet, physical activity, medication adherence to manage BP
- Work with local grocers to label low sodium and high potassium foods
- Recruitment to begin in mid-2017

Forthcoming Projects

- Diabetes self-management intervention for Washington Pacific Islanders
- DPP for Pacific Islander men
- Multi-level perspectives on Kidney Transplantation among Urban American Indians and Alaska Natives - Kidney donation and transplantation mixed methods study with AI/AN and renal providers



THANK YOU!

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